

Please print in type or use typewriter on one side only.
(If—no areas are specified for this type, i.e., 12 characters / month)

FORM 3		DANGEROUS WASTE PERMIT APPLICATION		1. EPA/STATE I.D. NUMBER WA 7 8 9 0 0 0 8 9 6 7	
FOR OFFICIAL USE ONLY		START		COMMENTS 005523	
APPLICATION APPROVED		DATE RECEIVED (mm, day, & yr.)			
II. FIRST OR REVISED APPLICATION					
Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE LD. Number, or if this is a revised application, enter your facility's EPA/STATE LD. Number in Section I above.					
A. FIRST APPLICATION (place an "X" below and provide the appropriate data)					
<input type="checkbox"/> 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)			<input checked="" type="checkbox"/> 2. NEW FACILITY (Complete item below.)		
MO. DAY YR. 12 1 919			FOR EXISTING FACILITIES, PROVIDE THE DATE (mm., day, & yr.) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the dates in the left)		
B. REVISED APPLICATION (place an "X" below and complete Section I above)					
<input type="checkbox"/> 1. FACILITY HAS AN INTERIM STATUS PERMIT			<input type="checkbox"/> 2. FACILITY HAS A FINAL PERMIT		
III. PROCESSES — CODES AND DESIGN CAPACITIES					
A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the (Section III-C).					
B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.					
1. AMOUNT — Enter the amount.					
2. UNIT OF MEASURE — For each amount entered in column B (1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.					
PROCESS		PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PRO- CESS CODE
Storage:				Treatment:	
CONTAINER (barrel, drum, etc.)	301	GALLONS OR LITERS		TANK	T01
TANK	302	GALLONS OR LITERS		SURFACE IMPOUNDMENT	T02
WASTE PILE	303	CUBIC YARDS OR CUBIC METERS		INCINERATOR	T03
SURFACE IMPOUNDMENT	304	GALLONS OR LITERS			
Disposal:					
INJECTION WELL	D80	GALLONS OR LITERS			
LANDFILL	D81	ACRE-FEET (The volume that would cover one acre to a depth of one foot)		OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Section III-C.)	T04
LAND APPLICATION	D82	ACRES OR HECTARES			
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS			
UNIT OF MEASURE		UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	D	HECTARE-METER	F
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	B
CUBIC METERS	C	GALLONS PER HOUR	S	HECTARES	Q
GALLONS PER DAY	U	LITERS PER HOUR	H		
EXAMPLE FOR COMPLETING SECTION III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.					
B. PROCESS DESIGN CAPACITY					
1. AMOUNT (specify)		2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	FOR OFFICIAL USE ONLY	
X-1 S 0 2 600		G		5 S 0 2 138,000	
X-2 T 0 3 20		E		6 S 0 2 112,000	
1 T 0 1 8,800		U		7	
2 T 0 1 17,600		U		8	
3 T 0 1 135		U		9	
4 S 0 2 106,000		G		10	

Continued from the front

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T01, S02 (Vitrification and Related Treatment and Storage Processes)

The Hanford Waste Vitrification Plant (HWVP) will be located in the 200 East Area of the Hanford Site. At the HWVP, mixed waste received from a pretreatment facility will be treated in a series of tanks. Treatment (T01) will include concentration by evaporation, adjustment with chemicals and glass forming materials, and immobilization in borosilicate glass (vitrification). The vitrified waste will be cast into stainless steel canisters and stored at the HWVP until they are shipped to a national repository. The HWVP is designed to treat 8,800 gallons of mixed waste per day, producing 220 pounds of glass per hour. The dangerous waste treatment tanks will also be capable of storing dangerous wastes (S02) under off-normal conditions. The total storage capacity of the tanks included in the vitrification process is 106,000 gallons.

(continued on next page)

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER — Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER — Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	included with above

CONTINUATION OF SECTION III.C. PROCESSES - CODES AND DESIGN CAPACITIES

T01, S02, (Tank Treatment and Storage of Secondary Mixed Waste)

Secondary liquid mixed waste generated by the HWVP will be collected and treated (T01) in a series of tanks. Treatment will include neutralization, filtration, molecular sieve absorption, and evaporation. The high-activity fraction from the treatment process will be recycled. The remainder will be transferred to the double-shell tanks. Treatment design capacity will be 17,600 gallons of mixed waste per day. The dangerous waste treatment tanks also will be capable of storing dangerous wastes (S02) under off-normal conditions. The total storage capacity of tanks handling secondary mixed waste is 138,000 gallons.

T01, S02 (Neutralization, Solar Evaporation, and Tank Storage of Secondary Nonradioactive Dangerous Wastes)

Secondary nonradioactive dangerous waste generated from leaks, spills, and/or overflows from chemical storage, makeup, and feed tanks will be collected, treated in a series of tanks, and stored (S02) at the HWVP. Treatment (T01) will include neutralization, concentration by solar evaporation, and decomposition of dangerous constituents during storage. Treatment design capacity is 135 gallons per day with a storage design capacity of 112,000 gallons.

Note - Subsequent modifications may be made to the Part A permit application (and Part B permit application, Revision 0, dated July 31, 1989) based on the disposition of the following two items currently under consideration by the Washington State Department of Ecology: (1) qualification of the HWVP as an interim status expansion facility, and (2) evaluation of the potential for listed waste in the double-shell tanks.

continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

ID NUMBER (enter from page 1)										
A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES									
							1. PROCESS CODES (enter)						2. PROCESS DESCRIPTION (If a code is not entered in D(1))			
1	W	T	0	1	19,000,000	P	T	0	1	S	0	2			Vitrification and related treatment and storage processes	
2	D	0	0	2												
3	D	0	0	5												
4	D	0	0	6												
5	D	0	0	7												
6	D	0	0	8												
7	D	0	1	0												
8	D	0	1	1		↓	↓	↓							Included With Above	
9	W	T	0	1	38,000,000	P	T	0	1	S	0	2			Tank treatment and storage of secondary mixed waste	
10	D	0	0	2												
11	D	0	0	5												
12	D	0	0	6												
13	D	0	0	7												
14	D	0	0	8												
15	D	0	1	0												
16	D	0	1	1		↓	↓	↓							Included With Above	
17	W	T	0	2	409,500	P	T	0	1	S	0	2			Neutralization, solar evaporation, and tank storage of secondary	
18	D	0	0	2		↓	↓	↓							nonradioactive dangerous waste	
19															Included With Above	
20																
21																
22																
23																
24																
25																
26																

Continued from the front

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The mixed waste treated at the HWVP will consist of existing and future high-activity Defense Waste stored in the double-shell tanks. This waste is expected to be designated as an Extremely Hazardous Waste (EHW) due to toxicity, and also designated as a Dangerous Waste (DW) due to the corrosivity and EP toxicity.

Secondary liquid mixed waste is expected to be designated a Dangerous Waste (DW) or an Extremely Hazardous Waste (EHW) due to the toxicity, corrosivity, and EP toxicity. Treatment is expected to eliminate the characteristics that result in an EHW designation before the waste is transferred out of the facility.

Secondary nonradioactive chemical waste treated and stored at the HWVP is expected to include waste that is EHW or DW due to the toxicity and corrosivity. Treatment at the HWVP is expected to eliminate the characteristics that result in an EHW designation before the waste is treated further and stored in the Solar Evaporation Tank.

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and areas of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on attached drawings and photographs

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME (print or type) Michael J. Lawrence
Manager, Richland Operations
United States Department of Energy

SIGNATURE

Edward D. Guldner

DATE SIGNED

10/31/89

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME (print or type)

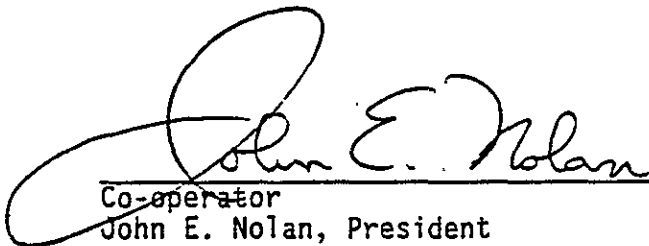
SEE ATTACHMENT

SIGNATURE

DATE SIGNED

X. OPERATOR CERTIFICATION

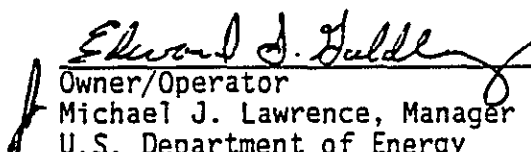
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.



Co-operator
John E. Nolan, President
Westinghouse Hanford Company

10/17/89

Date



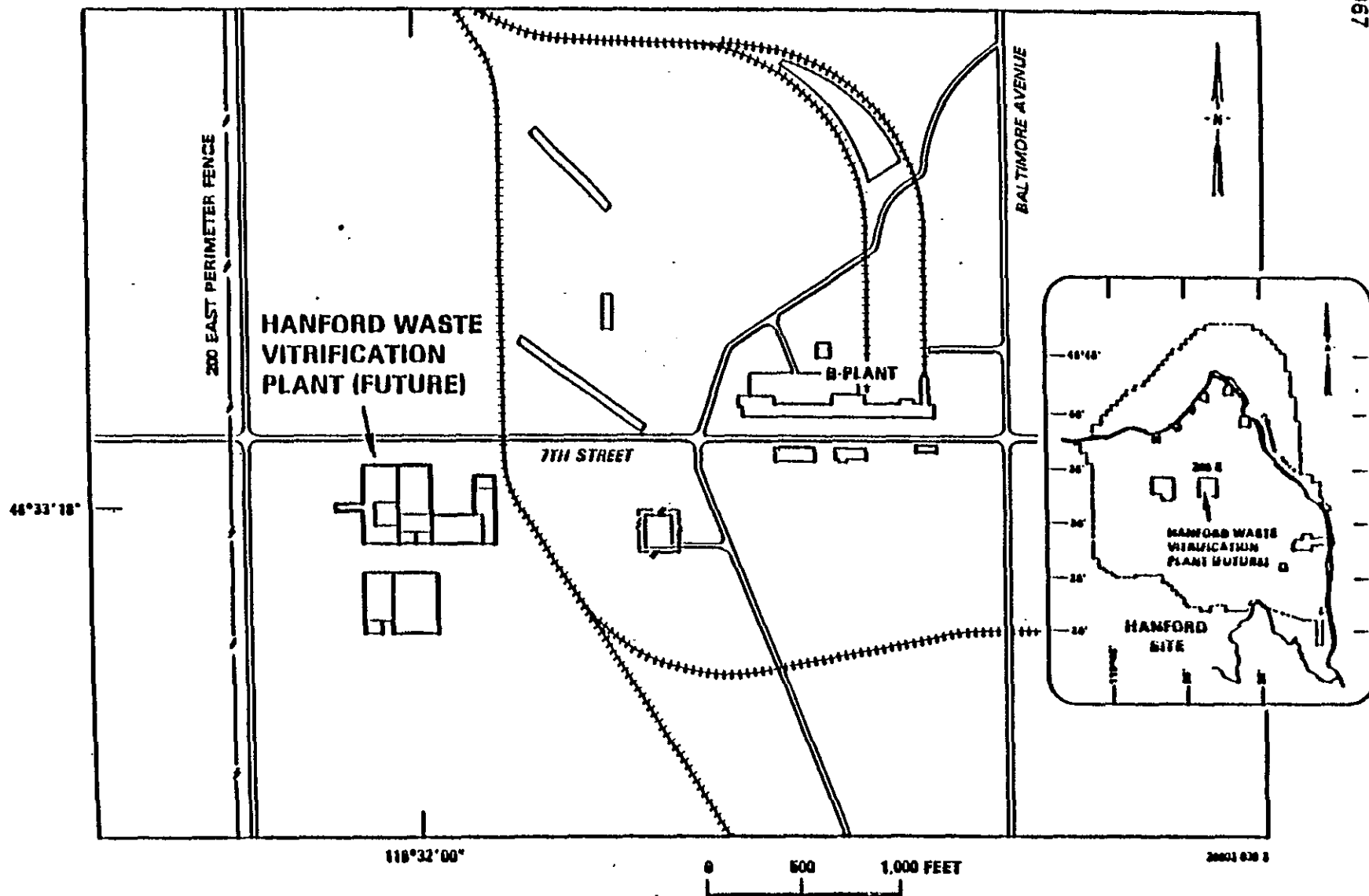
Owner/Operator
Michael J. Lawrence, Manager
U.S. Department of Energy
Richland Operations Office

10/31/89

Date

HANFORD WASTE VITRIFICATION PLANT FUTURE SITE PLAN

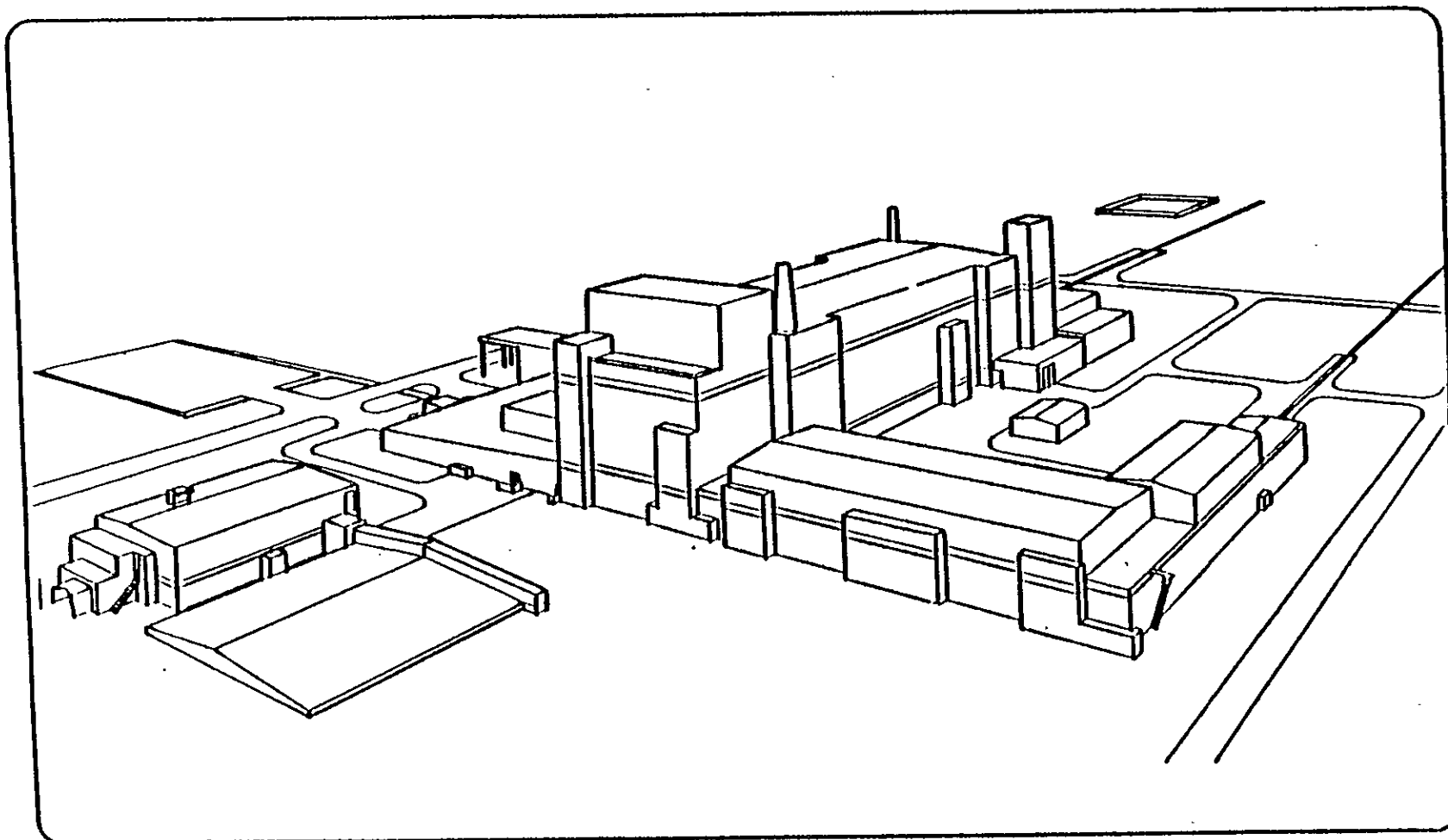
WA7890008967



7 0 1 1 7 5 0 7 4 3

HANFORD WASTE VITRIFICATION PLANT FUTURE FACILITY LAYOUT

WA7890008967



200002 0300 0

WA7890008967

BEST AVAILABLE COPY

HANFORD WASTE VITRIFICATION PLANT PROPOSED LOCATION



46°33'18"
119°32'00"

8600906-13CN
(PHOTO TAKEN 1986)